## CLAIMS

- An image forming apparatus comprising;
   a conveyance belt that conveys a recording
   medium by attracting the recording medium by an electrostatic force; and
  - a recording head that discharges liquid droplets toward the recording medium being conveyed by the conveyance belt at a predetermined conveyance speed,
- wherein the image forming apparatus further comprises:

charging means for applying alternating positive and negative electric charges onto said conveyance belt; and

- means for controlling a conveyance speed in accordance with a charge period length of the alternating positive and negative electric charges applied onto said conveyance belt.
- 2. The image forming apparatus as claimed in claim 1, wherein when the predetermined conveyance speed is higher than a conveyance speed corresponding to a predetermined value of the charge period length, said charging means applies the positive and negative electric charges during a period from a state where said

WO 2005/102704 PCT/JP2005/008267

-59-

conveyance belt is stopped until the predetermined conveyance speed is reached.

- 3. The image forming apparatus as claimed in claim 2, wherein said charging means applies at least one or more pairs of the positive and negative electric charges.
- 4. The image forming apparatus as claimed in claim 1, wherein when the predetermined conveyance speed for conveying the recording medium is higher than a conveyance speed corresponding to the predetermined period length, said charging means applies the positive and negative electric charges during a period from a state where said conveyance belt is at the predetermined conveyance sped until said conveyance belt is stopped.
- The image forming apparatus as claimed in claim 4, wherein said charging means applies at least
   one or more pairs of the positive and negative electric charges.
- The image forming apparatus as claimed in claim 1, wherein when the predetermined conveyance speed
   for conveying the recording medium is higher than a

conveyance speed corresponding to the predetermined period length, said charging means applies the positive and negative electric charges during a period from a state where said conveyance belt is stopped until the predetermined conveyance speed is reached and a period from a state where said conveyance belt is at the predetermined conveyance speed until said conveyance belt is stopped.

- 7. The image forming apparatus as claimed in claim 6, wherein said charging means applies at least one or more pairs of the positive and negative electric charges.
- 8. An image forming apparatus comprising:

  a conveyance belt that conveys a recording

  medium by attracting the recording medium by an

  electrostatic force; and
- a recording head that discharges liquid

  20 droplets toward the recording medium being conveyed by
  the conveyance belt,

wherein the image forming apparatus further comprises:

charging means for applying alternating
25 positive and negative electric charges onto said

WO 2005/102704 PCT/JP2005/008267

-61-

conveyance belt; and

means for controlling a conveyance speed in accordance with an existence of the charges on said . conveyance belt.

5

20

9. An image forming apparatus comprising:

a conveyance belt that conveys a recording medium by attracting the recording medium by an electrostatic force; and

a recording head that discharges liquid droplets toward the recording medium being conveyed by the conveyance belt at a predetermined conveyance speed,

wherein the image forming apparatus further comprises:

charging means for applying alternating positive and negative electric charges onto said conveyance belt;

means for controlling a charge period of the positive and negative electric charges applied onto said conveyance belt; and

means for controlling a conveyance speed in accordance with a charge period length of the positive and negative electric charges applied onto said conveyance belt,

wherein the charge period length is adjusted

5

20

25

by said means for controlling a charge period when the charge period length is equal to or longer than a predetermined length, and the conveyance speed is adjusted by said means for controlling a conveyance speed when the charge period length is shorter than a predetermined length.

- 10. The image forming apparatus as claimed in claim 9, wherein when the conveyance speed is higher than a speed corresponding to a predetermined value of the charge period length, said charging means applies the positive and negative electric charges during a period from a state where said conveyance belt is stopped until a predetermined conveyance speed is reached.
  - 11. The image forming apparatus as claimed in claim 10, wherein said charging means applies at least one or more pairs of the positive and negative electric charges.
  - 12. The image forming apparatus as claimed in claim 9, wherein when the predetermined conveyance speed for conveying the recording medium is higher than a conveyance speed corresponding to the predetermined

period length, said charging means applies the positive and negative electric charges during a period from a state where said conveyance belt is at the predetermined conveyance speed until said conveyance belt is stopped.

5

13. The image forming apparatus as claimed in claim 12, wherein said charging means applies at least one or more pairs of the positive and negative electric charges.

10

- 14. The image forming apparatus as claimed in claim 9, wherein when the predetermined conveyance speed for conveying the recording medium is higher than a conveyance speed corresponding to the predetermined

  15 period length, said charging means applies the positive and negative electric charges during a period from a state where said conveyance belt is stopped until the predetermined conveyance speed is reached and a period from a state where said conveyance belt is at the

  20 predetermined conveyance speed until said conveyance belt is stopped.
- 15. The image forming apparatus as claimed in claim 14, wherein said charging means applies at least one or more pairs of the positive and negative electric

charges.